middle. This juvenile stage has been very well described by Taezanowski (Orn. du Pérou, iii. p. 418).

Theristicus branickii seems to be confined to the highlands of Peru and Ecuador : its area, so far as we know at present, extends from Pitumarea, near Tinta, on the south, to Vallevicioso in Ecuador on the north.

This species has been confounded with *T. melanopis* by Tschudi and Cabanis, by Sclater and Salvin, and also later on by Taczanowski. By Graf von Berlepsch and Stolzmann it was recognized as perfectly distinct, and the specific characters were pointed out quite clearly. Notwithstanding this, Dr. Sharpe has again mixed it up with *T. melanopis*, under the impression that the differences of plumage relied on by Berlepsch and Stolzmann for the separation of *T. branickii* were only those of age or season. –

But the specific validity of this species, agreed to quite recently also by Dr. Finsch, cannot be denied any longer, and I hope that the figures drawn by Mr. Keulemans (Plates IX. and X.), taken from Dr. Festa's specimens (adult and young), will make *T. branickii* recognizable at a glance, and settle the question for the future.

XXX.—On the Birds of St. Lucia Lake in Zululand. By R. B. and J. D. S. WOODWARD *.

HAVING just returned from an interesting trip to St. Lucia Lake, Zululand, we send you a short account of the birds met with. On September 19th, 1899, we left the Lower Tugela, the northern terminus of the Natal Railway, and, crossing the river, proceeded with our cart and oxen along the coastroad. We forded in succession the rivers Amatikulu, Umsundusi, Umhlatusi, and Umfolosi, and on the eighth day reached an extensive wood called the "Duku-duku" or "Wandering Bush," which stretches from the Umfolosi along the coast. This country is undulating, and the forest

* For former articles on this subject by Messrs. Woodward see 'Ibis,' 1897, p. 400 and p. 495, and 1898, p. 216.

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extends over low hills and swampy valleys, and, being unhealthy, is thinly populated, the native kraals being on the outskirts. We did not find it a good locality for birds, and although it was the spring of the year, we heard no new notes, and even the commoner species were not plentiful. We obtained here, however, a specimen of the Pileated Francolin (*Falco pileatus*), which we had not met with before.

After a short stay here we went on, passing through a grassy country interspersed with "pans" or shallow sheets of fresh water, often covered with the blue lotus, which filled the air with its sweet scent, and other aquatic plants, and bordered with rushes—the larger ponds being visited by waterfowl in considerable numbers.

On November 8th we reached St. Lucia Lake, near its southern end, where we found the water so shallow that we were able to wade right across it, though this was rather a tedious process, it being a mile broad at this point. As there was a considerable deposit of mud, we left our wagon on the bank and took our things over by bearers. When the water is deep a boat is used.

The country we wished to explore lay between the lake and the sea—a strip of land about four miles broad, but increasing in width towards the northern end. We found the land here more elevated and diversified, with several sand-hills of considerable height. Mr. Feyling has a Mission Station in this locality : he has not been long here, but finds the climate more healthy than the inland side of the lake. He was engaged in building a new house, commanding a fine view of the ocean on one side and the lake on the other. This was constructed chiefly of timber from a large barque that had been wrecked on the coast. This gentleman informed us that he had shot a specimen of the Spoonbill (*Platalea alba*) on the lake, but that it appeared to be rare.

After stopping about a fortnight in this neighbourhood, which consists principally of grassy hills interspersed with clumps of low bush, with the aid of the missionary's cart, which was drawn by a span of donkeys, we moved about ten miles further up the coast, where there is an extensive forest stretching for many miles northward, and covering some peaks of considerable height. We did not find a great variety of birds in this wood, perhaps on account of its proximity to the sea; but there were some interesting species among them.

The following is a list of the birds met with on St. Lucia Lake and in its vicinity, with our field-notes added.

HELOTARSUS ECAUDATUS. (Bateleur Eagle.)

Sharpe, ed. Layard's Birds S. Afr. p. 48.

Several times we saw a pair of this fine bird hovering round. It has the peculiar habit of turning somersaults in the air, like a Tumbler Pigeon. With its black body and bright red face and feet it has quite an imposing appearance. It has a clear, resonant, almost human-like cry.

MILVUS ÆGYPTIUS. (Yellow-billed Kite.)

Op. cit. p. 49.

Very common and easily shot on the wing. It is very destructive to poultry, and will even partake of mussels and fishes when left by the natives on the beaches. We found locusts and bones of birds in their stomachs.

BAZA VERREAUXI. (Verreaux's Cuckoo Falcon.)

Op. cit. p. 54, pl. i.

A specimen that we shot measured fifteen inches. Iris and feet bright yellow. It had a rufous collar on the nape, which seems to have been overlooked in previous descriptions of this species.

BUBO LACTEUS. (Verreaux's Eagle-Owl.)

Op. cit. p. 71.

We saw one pair of this fine Owl, which we had previously shot on the Umfolosi. It has a loud, shrill, eagle-like cry. This bird preys on hares and other small wild animals and birds.

TURACUS CORYTHAIX. (Green Loury.) Shelley, Cat. B. xix. p. 440.

These Turacous are common here, their hoarse croaking being constantly heard in the thick bush. The nest is built

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in the top of a tree and is not often found. It is made of sticks, and the eggs are white. We noticed that the birds shot after rain had lost much of the brilliancy of the carmine colour of the wing-feathers; but apparently the colour returns after the weather gets dry again. This is not surprising, as the pigment called Turacine is extracted from these feathers.

COSMETORNIS VEXILLARIUS. (Standard-winged Nightjar.) Sharpe, ed. Layard's B. S. Africa, p. 89.

We shot two specimens of this remarkable Nightjar, the first we have seen in South Africa. We found the remains of beetles in their stomachs. Although there are so many varieties of Nightjar found in this country, we know of only one cry, which we think must be common to several species.

HAPALODERMA NARINA. (Narina Trogon.) Op. cit. p. 106. Plentiful, and its monotonous cry is heard continually. CERVLE RUDIS. (Pied Kingfisher.)

Op. cit. p. 110.

Plentiful on the lake, where it hovers like a Kestrel before pouncing down on its prey.

HALCYON ALBIVENTRIS. (Brown-hooded Kingfisher.) Op. cit. p. 115.

A common land-bird here, rarely seen on the water, and feeding principally on insects.

BUCEROS BUCCINATOR. (Trumpeter Hornbill.) Op. cit. p. 125.

TOCCUS ERVITHORMYNCHUS. (Red-billed Hornbill.) Both these Hornbills are often seen near the lake.

CUCULUS KLAASI. (Klaas's Cuckoo.) Op. cit. p. 155.

This is the only Green Cuckoo we found here, though we shot the Emerald Cuckoo in the Duku-duku.

CENTROPUS SENEGALENSIS. (Lark-hecled Cuekoo.) Sharpe, ed. Layard's B. S. Afr. p. 162.

Very plentiful and remarkably tame, even coming to our tent to eat porridge thrown out to them.

CEUTHMOCHARES AUSTRALIS. (South African Coucal.) Op. cit. p. 161, pl. v. fig. 1.

Like a Loury this bird creeps about the branches of the trees. It has a peculiar long-drawn cry, preceded by a loud clucking note.

POGONORHYNCHUS TORQUATUS. (Black-collared Barbet.) Op. cit. p. 172, Abundant.

BARBATULA BILINEATA. (Bridled Barbet.)

Op. cit. p. 176.

Abundant. We observed that the ery of this bird exactly resembles the metallic note of the Tinker Barbet (B. pusilla), which is not found in this district.

CAMPOTHERA ABINGTONI. (Golden-tailed Woodpecker.) Op. cit. p. 182. This is the only Woodpecker we saw in the district.

Cossypha bicolor. (Noisy Chat-Thrush.) Op. cit. p. 222.

We call this species the "Natal Mocking-bird," as it imitates the erics of a number of birds.

COSSYPHA CAFFRA. (Cape Chat-Thrush.) Op. cit. p. 224. Common. PYCNONOTUS LAYARDI. (Layard's Bulbul.) Op. cit. p. 815. PYCNONOTUS CAPENSIS. (Cape Bulbul.) Both these Bulbuls are plentiful here. PHYLLOSTREPHUS CAPENSIS. (Cape Bristle-necked Thrush.) Op. cit. p. 203. Plentiful. CRINIGER FLAVIVENTRIS. (Yellow-breasted Bulbul.) Sharpe, ed. Layard's B. S. Afr. p. 203. Plentiful.

ANDROPADUS IMPORTUNUS. (Sombre Bulbul.) Op. cit. p. 204. Plentiful.

MUSCICAPA CERULESCENS. (Blue-grey Flycatcher.) Op. cit. p. 340. Common; it makes a grass nest in holes in trees.

PLATYSTIRA PELTATA. (Green-throated Flycatcher.) Op. cit. p. 345.

This is apparently Layard and Sharpe's Green-throated Flycatcher (*Platystira peltata*). We shot two specimens; they measured five inches in length, rather larger than the size given by Layard and Sharpe.

This is the first time we have met this bird; it seems to keep to the undergrowth. Its only note appears to be a low whistle. The bright scarlet wattle above the eyes is very conspicuous.

PACHYPRORA MOLITOR. (White-flanked Flycatcher.) Op. cit. p. 348. Common in this district.

PACHYPRORA FRATRUM Shelley.* A Flycatcher new to us, evidently nearly allied to the above.

* [Capt. Shelley agrees with Messrs. Woodward in referring these specimens to a new species, and describes it as follows :---

" PACHYPRORA FRATRUM, sp. nov.

"Most nearly allied to *P. mixta* Shelley (P. Z. S. 1889, p. 359, pl. xl.), and, with the exception of the chestnut crop-band, agrees well with the plumage of the adult male of that species.

"This species belongs to the group characterized by having the under wing-coverts white, with a black patch next to the bend of the wing, to which *P. capensis* and *P. dimorpha* should also be referred. It is probably an adult female, as it has the crop-band chestnut, and differs from the females of all the other known species in having the throat above the crop-band entirely pure white, and from the females of the The specimens that we send (male and female) are almost identical. The note is different from that of the other species of the genus. Plumage, upper parts dark grey; a broad strip of black runs through the eye; chin and throat white; chest and thighs light orange-buff, and a patch of the same colour on the wing-coverts, a white line extending from the base of the bill over the eye. Iris orange, feet and bill black. Length: male $4\frac{1}{4}$ inches, female $3\frac{3}{4}$.

TERPSIPHONE PERSPICILLATA. (South African Paradise-Flycatcher.)

Sharpe, ed. Layard's B. S. Afr. p. 352.

Not very common. The bright blue cere and base of bill of this bird fade after death.

LANIARIUS GULARIS. (Zambesi Green Shrike.) Op. cit. p. 390.

This rare bird, which we first met with on the Pongola, we obtained again here. It sings fairly well, its notes being

loud and varied.

LANIARIUS CUBLA. (Lesser Puff-backed Bush-Shrike.) Op. cit. p. 392.

This bird is also plentiful and we have found its nest. See our 'Natal Birds,' p. 34.

LANIARIUS FERRUGINEUS. (Large Puff - backed Bush-Shrike.)

Op. cit. p. 393.

This bird is also plentiful on the lake : we have found the nest. See our 'Natal Birds,' p. 34.

other members of this group it further differs in the back being grey of the same shade as the crown, and in the entire absence of rufous on the wings and sides of the body.

[&]quot;The second specimen is in immature plumage and differs in having a slight wash of rufous on the upper throat, a faint olive shade on the upper back, and some broad rufous-buff margins to the feathers of the wing. The bill is slightly larger and wider than in *P. capensis* and *P. dimorpha*, but agrees perfectly with that of *P. mixta.*"]

LANIARIUS POLIOCEPHALUS. (Large Grey-headed Bush-Shrike.)

Sharpe, ed. Layard's B. S. Afr. p. 387.

The mournful whistle of this bird is often heard; it is preceded by a clicking or snapping noise made by its bill.

LANIARIUS QUADRICOLOR. (Natal Bush-Shrike.)

Op. cit. p. 381.

One of the commonest birds along this coast. They make their nests in low bushes, laying four white eggs.

LANIARIUS SENEGALUS. (Common Red-winged Bush-Shrike.)

Op. cit. p. 394.

Plentiful. It nests in a low tree and lays pretty eggs. They are white, pencilled with black marks.

MACRONYX STRIOLATUS. (Southern Yellow-breasted Long-Claw.)

Op. cit. p. 532.

This seems to be the only Lark found here, but we saw several of the Red-breasted Lark (M. ameliæ) on the other side of the lake.

DICRURUS LUDWIGI. (Small Drongo.) Op. cit. p. 410. Met with on the lake.

The Sun-birds are represented here by *Cinnyris verreauxi*, *C. olivaceus*, and *Anthodiæta collaris*. We also noticed four species of Bush-Warblers.

Game-birds are particularly scarce at St. Lucia, and we neither saw nor heard any of the Francolins, though they are said to come here in the winter. Verreaux's Guinea-fowl (Numida verreauxi) was abundant.

Of the Water-birds of St. Lucia the following were specially noticeable :---

PELECANUS MITRATUS. (Mitred Pelican.) Op. cit. p. 776. We saw a large flock of these birds flying up to their feeding-ground beyond the drift. Their ery is loud and harsh. They looked very picturesque, flying over the lake in their accustomed wedge-like formation.

PHENICOPTERUS MINOR. (South African Flamingo.)

Phænicopterus erythræus, Sharpe, ed. Layard's B. S. Afr. p. 744:

This bird was fairly plentiful, but kept well out of range of our fowling-pieces. Mr. Lindfield, of the Mission, shot one with his rifle, which we preserved.

PHALACROCORAX AFRICANUS. (Long-tailed Cormorant.) Op. cit. p. 781.

We found this bird very tame, generally sitting on stumps of trees in the water, often with its wings spread out to dry. On the opposite side of the Lake there was a colony of them nesting in the month of June.

P. lucidus (op. cit. p. 779) was also abundant and had the same habits.

PLOTUS LEVAILLANTI. (African Darter.) Op. cit. p. 782.

This bird was constantly seen swimming on the water, with its head and neck *only* visible.

PARRA AFRICANA. (African Jacana.)

Op. cit. p. 648.

Very common. They seem to be generally engaged chasing each other through the air, or running over the flat leaves of the blue lotus.

We also saw Black Rails (*Limnocorax niger*), Purple Gallinules (*Porphyrio smaragdonotus*), two sorts of Ibises (*Ibis æthiopica* and *Geronticus hagedash*), and many Ducks, besides Plovers and Sandpipers.